(b) (6) [redacted]

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Sent: Friday, April 5, 2019 5:40 PM
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Subject: PE Monthly 5 APR 2019
Attachments: PEAT Monthly_MAR19.pdf; PE Endstate LOEs Metrics.pdf
Signed By: (b) (6) [redacted]

CNO, Admirals,

PEAT monthly update follows, no assistance required.

First, I want to provide an update on two recent PEs that attracted some attention, specifically VFA-154 (FA-18F, Lemoore, hyperbaric treatment) and VT-22 (T-45C, Kingsville, impaired landing). In the case of the former, hasty and incomplete analysis led to some conclusions regarding carbon monoxide that were simply not accurate. The aircraft in question in this case performed as designed and there is no indication that it or any of its subsystems contributed to the aviator's symptoms.

The T-45C PE in Kingsville attracted attention due to the fact that it resulted in an impaired landing which we had not seen in a while in our T-45C Fleet. CRU-123 data from that aircraft indicated the OBOGS performed as designed and there is no evidence the pilot's symptoms were associated with aircraft performance.

Both these incidents highlight a challenge we face when communicating findings post-event. While we can speak openly and in great detail about the data coming off and from the aircraft in question, the same is not true wrt aviator health/medical history. In both these cases, the aircraft involved performed as designed and subsequent medical evaluation revealed factors that are far more likely to have contributed to the event. The VFA-154 PE, in fact, was likely not even related to flight. I am happy to have the Aeromedical Action Team provide further amplifying information in a more conducive forum, if desired.

RADM Leavitt's team at the Naval Safety Center recently updated the PE Reporting Guideline which relaxed the reporting timeline from 4 hours to 24 hours for events that do not involve hyperbaric treatment, impaired landing or a

foreign national. This relaxation will offer PE Rapid Response Teams more time to gather and accurately analyze data. The goal is to increase accuracy in initial reporting.

I took the opportunity to visit with leadership, instructors, students and flight surgeons in Kingsville this week to discuss their recent PE. The bottom line message to the aviators in Kingsville is that the aircraft is performing as designed, meeting specification, and in the rare instance it does not perform as designed it provides an alert to the aviator. With respect to future improvements, I emphasized that none of those improvements are aimed at correcting inherent design flaws, rather they are designed to improve component reliability. In my assessment, the open and transparent conversation was valuable which reaffirmed the importance of engagement via roadshow.

Switching gears to the PE Monthly, your comments regarding outcomes and metrics resonated and highlighted our frustration with using PE rates as a defining metric. It would be quixotic to think we will ever be able to move away from PE rates as a unit of measure, but we can provide objective, data-driven metrics that better illustrate progress.

To that end, I have provided two products this month. The first is the standard PE Monthly update with which you are familiar. The second is our initial iteration, focused on the metrics that best indicate progress. This month we focused on identifying the best way to indicate progress wrt FA-18 pressure. We will continue the process to fill out lines of effort and associated metrics for the remaining endstate elements in future versions. Additionally, we have work to do on what I refer to as "enabling metrics" (slamstick usage rate, slamstick/MU pairing accuracy, etc.) that directly contribute to the accuracy of our chosen primary metric.

For FA-18 pressure, with the goal of objectively measuring aircraft performance, we will use "Pressure Event" as our primary metric. A Pressure event is defined as a peak-to-peak magnitude change of >2000 ft at an average rate of > 0.2psi/sec for less than 15 seconds. This data is obtainable (slamstick) and can be analyzed relatively quickly without great cost or effort. As seen on slide 3, the overall trend for Pressure Events has improved slowly over time. That improvement can be attributed to the RCCA-informed work packages that have been implemented or IOC'd as detailed on the following slide. In the future we may explore normalizing Pressure Events per 100,000 flight hours, as well as differentiating Legacy vs Super Hornet.

As mentioned above, Slide 4 is a snapshot of the work packages that will affect movement of our primary metric. This slide is also a good visualization of what has been done/implemented and what will follow, as well as the associated timelines.

PEs since last report
Total: 12
Nine of the twelve events were related to pressure, with two resulting in hyperbaric treatment.

Past Engagements
- 25-27FEB: US Navy Aeromedical Conference (USNAC) keynote, Pensacola
- 26-28FEB: F/A-18 Super Hornet Systems Safety Working Group (SSWG), Key West
- 04-08MAR: Aviation Life Support Systems (ALSS) Maintainer Working Group, Miramar
- 11MAR: CNAF ENARG, North Island
- 12-14MAR: Aircrew Systems SSWG, In-service Management Panel (IMP), Miramar
- 19MAR: NAS Pax River, Meeting with PMA-202/265 and update on status of "Salty Dog" 415 (VX-23's fully instrumented ECS test aircraft)
- 02APR: NAS Kingsville, meeting with all TW-2 T-45C Instructors and students

Upcoming Engagements
- 9-10APR: NAWC-TSD Visit for RRL applications to PRs / AMEs as well as data analytics
- 21-25APR: CAG-5/MAG-12 PE Roadshow, MCAS Iwakuni, Japan

Very respectfully,

Lucky
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